General Chemistry Lab II
CHEM 110-Sec 02
Fall 2009

Instructor:
Dr. Emad El-Giar
Office: CNSB 124
Telephone: (318) 342-1832
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Class Time: Thursday 2:00-5:00 p.m.
Lecture room: CNSB 335
Lab: CNSB 230

Office Hours: Monday: 9:00-10:00 a.m.
Monday: 8:30-9:30 p.m.
Tuesday: 9:00-10:00 a.m.
Wednesday: 8:30-9:30 p.m.
Thursday: 1:00-2:00 p.m.

Course Content:
A laboratory course to accompany CHEM 108.

Goals/Objectives:
Mastery of selected laboratory methods that illustrate principles described General Chemistry I (CHEM 107) and General Chemistry II (CHEM 108).

Requirements:
Be eligible for Math 111 or more advanced mathematics course.
Credit or registration in Chemistry 108.

Required Materials:
Text: *Chemistry 110 Lab Manual* (Department of Chemistry, ULM).
Material Covered: Most of the manual and other material to be given.
Pencil (required) and Pen (optional)
Scientific Calculator (does not need to be graphing)

NOTE: You must wear eye protection at all times while in the laboratory. You must also wear closed toed shoes. Do not wear shorts or short skirts. Failure to do so will result in your being ejected from the laboratory.

Attendance:

Attendance policies in this course are based on the attendance policies as stated in the Students Handbook used by the University (**please read below**). Attendance is mandatory and is important to your success in this course. You need to bring a calculator to every lab. Cell phones must be turned off (NOT VIBRATE) to avoid disrupting learning for your fellow students and are forbidden. I want them out of sight.

Academic Integrity:

Please see the ULM published policy on Academic Dishonesty at (http://www.ulm.edu/studentpolicy/)
We expect the highest standards of academic honesty. Violations of academic honesty include the following:

- Cheating: This includes seeks or giving unauthorized help on examinations, papers, and other academic assignments.
- Plagiarism: This is defined as using another's words or ideas and representing them as one's own either knowingly or unknowingly. In other words, by not documenting ideas or putting quotations around exact phrasing and documenting the source, one is committing plagiarism.
- Misconduct in the area of academic honesty is subject to disciplinary action, which can include failure for the assignment or even failure of the course.

Student services:

Information about ULM student services, such as Student Success Center (http://www.ulm/edu.cass/), Counseling Center (http://ulm.edu/councelingcenter/), Special Needs at (http://www.ulm.edu/studentaffairs/).
If you have special needs that I need to be made aware you should contact me within the first two days of class.

EVALUATION

Laboratories: There are a total of 13 laboratories (including the check-in) required to analyze three unknowns (10 points each) and conduct eight separate experiments (10 points each). The Final Exam/Check-out laboratory includes a **comprehensive** final quiz (100 points). Also, there are 10 post-lab quizzes. The quizzes will cover material from the previous day/week's lecture and experiment.

Grading: post-lab quizzes are based on the pre-lab lecture of the previous session scheduled for that day

Make-up Exam:
ONE make-up lab will be given at the end of the term (please see the syllabus), but only if the student presents a **valid university excuse** (see ULM Code of Student Conduct) as soon as he/she returns to campus following the missed lab.

If you miss two excused labs, the average of the make-up experiment and the average of the final comprehensive exam will be used to replace the two missed labs and quizzes.

If you miss more than two labs, whether excused or not, you have to drop the class if time permits. If you miss the third lab after the deadline for withdraw is over, you will get an **F** in the class.

Grading:

Pre-lab quizzes	**(11 x 10 pts)**	**110 pts**
Colligative exp + Unknowns	**(4 x 10 pts)**	**40 pts**
Lab reports	**(7 x 20 pts)**	**140 pts**
Final Exam	**100 pts**	**100 pts**
Course Total:		**390 pts**

Grading Scale:

90.0 – 100%	**A**
80.0 – 89.99%	**B**
70.0 – 79.99%	**C**
60.0 – 69.99%	**D**
< 60.0%	**F**

DEPARTMENTAL DROP POLICY:

For students who are currently enrolled in CHEM108 (and have not previously passed CHEM 108), if you drop CHEM 108 you cannot remain in CHEM 110 without permission. The final day to drop a class is **Friday September 25**. Please obtain the permission form to remain in CHEM 110 if you drop CHEM 108 at the web site below. Talk to me before dropping!

http://www.ulm.edu/chemistry/courses/drop policy.html

TENTATIVE LABORATORY SCHEDULE#

Date	Quiz	Lecture Material	Lab work
Aug 27	**No Quiz**	Syllabus/Safety/Grading/Introduction to the qualitative analysis scheme	Check-in
Sept 03	**Quiz 1** Safety	Colligative Properties	Freezing point depression
Sept 10	**Quiz 2** Freezing point	Selective separation of cations Part 1: Group I (Ag^+, Pb^{2+}, Hg_2^{2+})	Group I unknowns*
Sept 17	**Quiz 3** Group I	Selective separation of cations Part 2: Group IV (NH_4^+, Ba^{2+}, Ca^{2+}, K^+)	Group IV unknowns*
Sept 24	**Quiz 4** Group IV	Qualitative identification of anions Anions (Cl^-, Br^-, I^-, $B_4O_7^{2-}$, NO_3^-)	Anions unknowns*
Oct 01	**Quiz 5** Anions	Qualitative Absorption Spectroscopy (QAS)	QAS$
Oct 08	**Quiz 6** QAS	Equilibrium and Le Châtelier's Principle	Equilibrium
Oct 15	**Quiz 7** Equilibrium	Quantitative Absorption Spectroscopy–Cu^{2+} (QAS-Cu^{2+})	QAS-$Cu^{2+}$$
Oct 22	**Quiz 8** QAS-Cu^{2+}	pH Titrations of Acids by Base	pH Titrations$
Oct 29	**Quiz 9** pH Titrations	Henderson-Hasselbalch Equation (H-H Equation)	H-H Equation$
Nov 05	**Quiz 10** H-H Equation	pK_a of an Indicator (In)	Indicator pK_a
Nov 12	**Quiz 11** pKa of In	Determination of the solubility product (K_{sp}) of PbI_2	K_{sp} of $PbI_2$$
Nov 19	**Final** K_{sp}	Final Exam (**Comprehensive**) Make-up: Synthesis and Purification of a Coordination Compound	Check-out Make-up

U* = Unknown Samples: Identification of unknown samples is to be turned in when completed.
$ = Laboratory Report: Completed lab reports are to be turned in the day/week following the previous experiment. **#ALL information is tentative and subject to revision.**

ULM Policies Regarding Class Attendance and Cell Phones

CLASS ATTENDANCE REGULATIONS

This policy replaces the one published in the *2007-2008 Undergraduate Catalog*.

1. Class attendance is regarded as an obligation and a privilege, and all students are expected to attend regularly and punctually all classes in which they are enrolled. Failure to do so may jeopardize a student's scholastic standing and may lead to suspension from the University.
2. Any student who is not present for **at least 75%** of the scheduled class sessions in any course may receive a grade of **W** if this condition occurs prior to the last day to drop a course or a grade of **F** after that date.
3. Any University-related activity requiring an absence from class will count as an absence when determining if a student has attended 75% of class meetings.
4. Students are responsible for the effect absences have on all forms of evaluating course performance. Thus, the student is responsible for arranging the allowed make up of any missed work.

CELL PHONE POLICY

Cell phones should be turned off or set to vibrate only when in academic buildings (including the University Library) and may be used only in restrooms, group study rooms, and offices. Text messaging may be used throughout the Library (with the exception of the classrooms) provided that no audible sound is used to notify the recipients.

All people carrying cell phones into a classroom, laboratory, or clinic must turn off and store (e.g., in a backpack, purse, phone holster, or other similar item) their phones prior to entering the room. Cell phones are not allowed on desk or table tops. If there is an extenuating circumstance that requires the cell phone to be on during a class, the student must obtain permission from the instructor prior to the beginning of class and must operate the phone in a silent (vibrate only) mode. Each instructor may further restrict the use of cell phones in class and may determine the consequences for violations of this policy.

People who violate this cell phone use policy may be asked to leave the building.

Chemistry 110 Lab-Sec 01 &02
University of Louisiana at Monroe
Summer II 2008
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I acknowledge that I have been given a Laboratory Syllabus for Chemistry 110. I have read the Syllabus and I voluntarily agree to follow the requirements and procedures for the course as set forth in the syllabus and the policies set forth in the Students Handbook used by the University. I voluntarily agree to follow all laboratory safety rules as outlined in the laboratory manual. I am responsible for my actions and any repercussions that I might receive due to not following the course and university policies.

STUDENT'S NAME (please print): _____

STUDENT'S SIGNATURE (handwritten): _____

LAB DAY, TIME, and SECTION: _____

DATE: _____

BEST NUMBER TO CONTACT YOU AT: _____

EMAIL ADDRESS: _____